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Podification: Horatio and the metamorphosis mystery

Daniel Driscoll

PODIFICATION
Horatio and the Metamorphosis Mystery

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ABSTRACT

The animated film, “Podification: Horatio and the Metamorphosis Mystery” is the tale of a caterpillar, Horatio, who is faced with what could be the final moments of his life. The story tells the end of his journey and his interactions with his few remaining friends. The film was created using Autodesk Maya, Adobe Creative Suite and edited using Final Cut Pro.

The intention of the film was to create a small world, populate it with a broad range of characters, and communicate the central narrative theme which encompassed change, the unknown, and the uncertainties we all face in our own lives.

While computer generated, a great challenge of this project was creating a world and film in a digital, virtual world that began as 2D illustrations and could also draw on my experience as a stop motion animator. The goal of a thesis film, animated or live action, is to tell a story, communicate an idea, and bring together everything learned from past work into a new project. Building on my past projects, I worked to improve my skills in visual storytelling and directing. These goals could only be met with improving modeling techniques of characters, as well as by giving each character a distinct and strong personality, easily identifiable in the animation.

Through every step in the process of making this film, the story evolved and changed, yet it retained the central theme and became a satisfying film dealing with change.

This paper is the story of the story, following the creative and technical hurdles faced when making a short film. The appendices include artwork, storyboards and movie stills.

A BRIEF INTRODUCTION

I began my animation career in 1997, after studying stop motion animation in my undergraduate program. For years, I worked in a three dimensional space, physical, created with clay, wire, wood, silicone and metal. I had worked on stop motion commercials and television shows all over the country. I returned to academic world in 2005, when it seemed that stop motion might be a dying art form with the closing of animation studios throughout the country. I enrolled at Rochester Institute of Technology with a decent base in animation. When I had completed my courses and began my thesis project, the education I received in regards to writing, preproduction, storyboarding, and production was invaluable.

SCRIPT

The story of Horatio began in Skip Battaglia's scriptwriting course. Having just recently completing the Two Quarter film “Skull and Bunny in S'not Our Fault,” with Ignacio Barrios and Joe Arcovitch, I was writing longer and longer scripts for class assignments. “Skull and Bunny” was a ten minute comedic chase film, combining aspects of classic Road Runner cartoons with current Ren and Stimpy and Spongebob Squarepants programs. Writing the original script for this thesis, called simply “Metamorphosis,” I created a sprawling bar, filled with many insects, all drinking and casting their cares to the wind and laughing as friends met their end at the hands of predators and chrysalises. One insect, Horatio, slowly came to the realization that the population of the bar was dwindling, and perhaps some sort of action should be taken to preserve their fragile existence.

The class enjoyed the script, and a few classmates suggested that it would make an excellent thesis project.

While sketching character designs and thumb-nailing storyboards, the original script started shifting, and a few similar characters morphed into a single character. Multiple scenarios for caterpillars meeting their end faded as 'podification' became the predominate crisis Horatio faced. Podification and the mystery surrounding the process intrigued me, for it was a complete unknown for the caterpillars Joe, Frank, Clarence and Horatio. The way each of them dealt with what was in store

for them was different, and exploring that was really interesting for me. As the rewriting process continued, the idea of change, the acceptance, or rejection of it became more and more clear.

I intentionally wrote 'Podification' with dialog, both as a way to help personalize the anthropomorphic caterpillars, and to animate to the performance given by some great talent. An important part of the writing process was reading the script out loud, over and over, and streamlining some awkward dialog. Reading the script quickly revealed where the story slowed down, or fell apart. While listening to the voice records, there were times when a delivery would prompt a quick rewording or rewrite of a segment.

While writing the script, I sometimes felt lost and overwhelmed. As the script got longer, I questioned how the film would ever get completed. Having worked and talked with writers since that experience, I have learned that most writers will often write many more pages than necessary for an episode of television. One writer goes so far as to write ten extra pages for a 15 minute television show. The lesson being that it is always easier to cut what you don't need then to write what you don't have.

SCRIPT TO BOARDS

For my past projects, the storyboarding process was approached in different ways. While working on my One Quarter film, “The Adventures on Neeno7,” I used detailed illustrated boards. They were essential to producing a short in such a limited time frame and served me well for the production of that film. The Two Quarter Film, “Skull and Bunny in S'not our Fault” was a collaboration between three artists. There were tense moments and debate on the story, and when we finished the boards, the only people that would know what was going on were the three people working on the film. I knew that for the thesis film, I needed boards that would look more like what I had done for my film “Neeno7.”

While rewriting the script, I often sketched out stamp-sized drawings in the margins of the script. This helped to visualize a difficult action or cut that wasn't playing quite right in my head or on the page.

I drew all of my boards in a sketchbook while on a commuter train in New York City. That time was very productive for the development of the story and allowed a small chunk of time, twice a day, to

draw and play through the scenes in my head.

By the time I was drawing a final version of boards, the original opening with the Jumping Bug and Traveler had been cut, replaced with a lone caterpillar, Horatio, arriving at Joe and Erin's home. Bar scenes had also been streamlined. The Old Caterpillar was cut because his only real job was reinforcing Horatio's fear of the unknown and change. With Horatio's voice as the only rational voice, trying to convince two drunks of their eminent demise, the Old Caterpillar felt repetitive and unnecessary. Mandy the Praying Mantis was also left in the pages of the script, keeping the focus on the remaining three caterpillars in the bar.

The storyboards were an integral part of the preproduction process. By boarding in a 16 by 9 format, I was able to establish framing and backgrounds, and was prepared for working in that camera space. I also found it helpful to draw the characters repeatedly. The storyboarding process streamlined the designs and helped to bring the characters from the written page and into a visual medium. Establishing shots in the boarding process also helped to bring the world into focus and many elements of the backgrounds rendered in the boards can be seen in the film.

3D CHARACTER BUILDING

I knew that transforming the characters that I had developed on paper into three dimensional, solid-looking creatures would be a challenge. Before I even began the storyboarding process, I started to model Horatio in Maya. Those early models now seem chunky and not very aesthetically appealing. I was also working on facial blend shapes for the characters at that time. Those blend shapes reinforced to me the unappealing nature of those early models. I knew changes had to be made to the original design.

While drawing the characters repeatedly during the storyboarding process, I broke the characters down to their core elements, and created their expressions and characters with their basic personalities in mind. I approached the character building process from the perspective of a stop-motion animator and I wanted the characters to have a puppet-like quality to them. So focusing on the expressiveness of the characters' eyes was a main goal of mine. I modeled the eyes off of the googly eyes of the Muppets, Aardman's Wallace and Gromit style, as well as eyes that I have animated on past

stop motion projects. My thought process for this was to attempt to achieve as much expression with the characters without exaggeration and extreme facial poses. Watching Aardman animation, it becomes clear how much emotion and thought can be conveyed to the audience with a subtle glance or eye shift. The ability of the Muppeteers to breath life into puppets with the slightest twist of their wrist is also very inspiring when creating a character's personality.

When I started my thesis, it was my intent to do as much as of the film myself, from script to modeling, texturing, lighting, animation, rendering and editing. The aspect of the computer animation that is most difficult for me is the rigging of characters. I spent time learning the basics and quickly realized I would need outside help. After talking to students at RIT, as well as looking for riggers in Los Angeles, I found a software bundle online from Anzovin Studio called The Setup Machine and The Face Machine. These software packages were a great general auto rigger plugin, but they left plenty of work for me as the artist. The characters in “Podification” are not standard bipeds, and the Bartender has appendages that could be legs or arms, depending on his action, so there was a bit of experimentation as to how these characters would be put together in the rigging process. I also added my own rigging points for elements such as the characters eyelids and wings. For the computer animator who is not a computer programmer, the rigging tools offered by Anzovin are great options. It definitely saved me a lot of stress of trying to find someone experienced in rigging and a lot of hair pulling trying to learn how to rig these complicated characters myself.

BOARDS TO ANIMATIC

Having a complete set of boards, I used them to create an animatic using the characters and models I built in Maya. I did not scan my drawn boards and create a traditional 2D animatic. Instead, I transitioned to the 3D workspace for the animatic phase, which allowed for some experimentation with angles, lens choices and staging of the scenes. I have found in my professional experience that translating a 2D element to a dimensional workspace isn't always a smooth process. Timing and scale are important factors. Seeing 3D characters in an actual (virtual) space can open up new problems, as well as opportunities. Watching an unrigged character move from point A to point B in real time assisted me in making judgements as far as timing and editing; whereas one storyboard illustration

popping to the next pose in one frame sometimes misled the timing of the scene. I found that proportions of the 2D character were sometimes slightly off from their 3D rendered counter parts.

Working with the animatic in Maya, it was possible to get an accurate sense of how long the film would be. When I finished the first pass of the animatic, "Podification" was over ten minutes long without titles! The Maya animatic was therefore essential to the editing process. It showed in a 3D space what was running long, what could be combined or cut, and what looked great in an illustrated storyboard, but not in a virtual environment.

Once the animatic was locked using stand-in puppets and props, it was a simple process to replace them with the final characters, sets and props. These reasons are why I opted to create the animatic using playblasted movie scenes from Maya, rather than the 2D storyboards.

AUDIO FOR ANIMATION

I did some initial scratch recording for the animatic at Shadow Machine Animation in Los Angeles. It was my intention to do some voice records in my home town of Corning, New York, using friends and reaching out to the local acting community there. Before that could happen, my family decided to relocate to Los Angeles, so voice recording was continued in California.

In LA, I had worked with Andrew Racho and Scout Raskin at multiple studios. As I started looking for new talent for the records, I discovered that Andrew and Scout had started a small production company, Sonic Bunny Productions. They ran a small recording studio and had access to professional voice talent. Over a few weeks, I listened to demo tapes from actors and cast Musa Brooker as Horatio, Ben Lepley as Joe, Brad Carter as Clarence, and Dylan Chapman as Frank and the Bartender. It was fun to hear the script come to life, and Dylan and Brad had some amazing ad-libbed moments together in the sound booth. We spent the weekend doing records, and everyone put in so much hard work into their parts. It was a pleasure and a little tragic to cut the audio down to the length of the film. The characters now had voices, and new aspects of their personalities came through. Frank now had a southern drawl. This, combined with the his larger size gave him a slower, more deliberate movement. Clarence's height swayed with is drunken revelry, and his eyelids became heavy.

Musa Brooker did two records for me. The first gave Horatio's personality a nerdy, nasally

direction, that while funny, lacked much of the emotion that we were able to achieve in his second, more naturalistic read. Horatio became someone much more emotional, determined to live and even fight for his survival. A Horatio with more brain and a stuffy nose may not have fared so well.

ANIMATIC TO ANIMATION

All the stand-in elements created for the animatic were referenced into scene files. That allowed me the ability to replace those stand-ins with the final models, simply by replacing the reference files. Having professional experience as a stop motion animator was a double-edged sword when it came to animating in a virtual world. While prepping for a shot in stop motion, it is a simple process to force yourself to touch the puppet only once every ten to twenty frames for a pop-through. When animating a shot in Maya, I was able to step through the shot, blocking the character in much the same way as a pop-through in stop motion; however, it seemed that somewhere in that second pass of the pop-through I would begin tinkering with key frames and breakdown frames and sooner than I intended, I would be animating straight ahead, much like I would be doing on the production of stop motion television shows.

Having two or three characters on a set, each with their own voices and personalities was a real treat to animate and to watch how the characters played off one another. It was an interesting difference between stop motion and computer animation; the simple fact that with computer animation it is possible to focus all of your energy into animating one single character at a time. The ability to polish each character's performance before moving on to the next is not possible in stop motion. While animating for stop motion, the frame can only be taken if every character has been accounted for, and moved appropriately. It isn't possible to animate a single character in a stop motion scene, go back, and animate the next character.

A challenge that I did not anticipate was walking a character with four legs! To compensate for legs easily tangling, breaking geometry, and loosing sync with each other, I adopted a walk cycle based on the chaotic walk cycle of Gromit from the Wallace and Gromit series. The front legs were kept more realistic, holding the character's weight, and were responsive for moving the characters around.

The hind legs had the job of keeping up with the rest of the character. I found that as long as all the legs were moving, and had the impression that they were walking, that character was in fact walking!

The Bartender was also an interesting challenge. I found little room for subtlety when animating him. For the the Bartender to not become a jumbled, tangled knot of legs, he needed to have a strong locked pose (such as during his fight pose up in the air) or his arms and legs needed to be moving in a syncopated rhythm, implying running and walking. When in motion, the Bartender's actions always looked better when not completely in sync with each other. Even while running, he had legs and arms that did not match his overall motion. While difficult, the Bartender became a fun and favorite character- one that I may revisit in the future.

LIGHTING, TEXTURING, RENDERING and COMPOSITING

I enjoyed experimenting and playing in the sandbox that is texturing and lighting. I am still learning all the different techniques and properties that go into creating the final images rendered out of Maya. In no way do I find this area my strongest, and in hindsight, I should have begun the texturing and lighting of the film while I was creating the animatic in Maya. That would have allowed me to animate a scene and begin rendering right away, while what I ended up doing was completing the animation of the film before I went back to the beginning of the project to start texturing, lighting and rendering. Tackling this creative and technical aspect of the thesis at the end was my biggest mistake in the production pipeline. I was fortunate to have completed the animation early enough to spend time texturing and lighting my film in a satisfactory way.

Setting up a render pipeline is counterintuitive to me with my background as a stop motion animator, but learning how to set up multiple render passes was a great time saver and helped immensely when putting the final composites together in After Effects. Having multiple layers of every scene allowed me the flexibility to make small fixes, add effects, and play with the depth of field in rendered 2D images.

Rendering from Maya an image for After Effects was where I learned the most about the

process of producing a computer animated film. With this new knowledge base, I hope to expand and develop future projects more effectively.

EDITING and SOUND

As the renders came out of Maya and After Effects, I began to cut the audio and video together in Final Cut Pro. I cut the animatic together using Final Cut Pro as well, so after duplicating the animatic file, I started to replace animatic files with the final movies.

As the final film came together, it seemed that there were only three moments that seemed to confuse viewers or slowed the film down. The opening scene was the first problem. Being far too long, I could see that viewers might tune out before the film had even begun. It was the first shot that I had animated, so to go back and trim it down hurt a little. After editing, the film started quicker, and that moment was a much more manageable sequence.

The second cut was much more difficult. It involved a scene that had survived from the original script, but the action that caused Horatio's reaction was gone. In the original script, Horatio was chased by hungry birds, and was almost eaten- jumping into the bar at the last moment- saving his skin. Then, shaken, he stumbled to the table of Frank and Clarence, took a swig from a glass, and passed out. Frank and Clarence, drunk and not sure what to do, poked him repeatedly with a stick to revive him. In context, I thought it was a funny scene to have Horatio escape death only to be beaten by his friends. With the chase gone, and Horatio coming from Joe and Erin's house, the action of drinking, passing out, and Frank and Clarence poking him seemed out of place. So out it went. The sequence was replaced with Horatio, lost in thought, walking past Frank and Clarence, who continued their drinking... until interrupted by Horatio and his speech about the dangers of podification.

The final shot needing to be redone in Maya was the demise of Frank. In the original shot, he was talking to the Bartender, but the Bartender was much more obscured, and his arms were never seen. Frank was dragged off screen and the viewer was left wondering what just happened. I did not want to reveal the spider until the confrontation with Horatio, but the new edit showing the bartender's arms gave the audience enough of an explanation of the scene and a sense of danger without fully

revealing what the damage was.

From the beginning, the script had a specific tale to tell. Through rewriting, detailed storyboards, and a fully rendered 3D animatic, little was left to chance. So in the final days of editing, very little didn't fit, and the elements that didn't fit were cut with very little consequence and reworking of the animated scenes.

After extensive audio records and editing for the voice tracks, I wanted a simpler way of adding sound effects and music to my film. For the music score of my two-quarter film, “Skull and Bunny in S'not our Fault,” my group used the music of Kevin MacLeod at www.incompetech.com. We were very pleased with the results, and so, for 'Podification,' I listened to hours of music, and came up with a diverse range of music for the score. Mr. MacLeod produced thousands of songs that are royalty-free. All he asked in return for the use of his music was credit and a donation.

Sound effects were a combination of audio that I recorded, and layering audio effects found online at www.freesound.org, a community of audiophiles who upload their own sounds to share with the Internet. While editing the sound, I tended to layer different types of sound and juxtapose different sounds to create a desired effect.

FINAL THOUGHTS

Flying out to Rochester for the fall screenings was nerve racking. I was expecting some sort of technical glitch or unforeseen problem springing up and ruining the showing of 'Podification.' My fears were unfounded though, and overall, the film did very well. It was a really intense moment sharing a film that had so much time and energy invested in it. It is a practice I should participate in more often!

I love animation. I've been animating professionally since 1997. Much has changed since then. Computers have become more affordable, and it has become very easy to find information and become a better animator. Whether its 2D, stop motion or computer animation, the tools are there for an individual to become an animator. What that person misses out on is the *exchange of information.* When I first became interested in animation I thought it would be me, locked away, alone pushing a puppet or drawing. That is how I hoped it would be. Of course, this is far from the reality of the professional animator. The crew size for the production of animation for television and feature films is

quite amazing! With these large crews the cross pollination of ideas and experience is what makes going to work every day such a treat. In every production it is possible to learn something new that can be applied to how you animate.

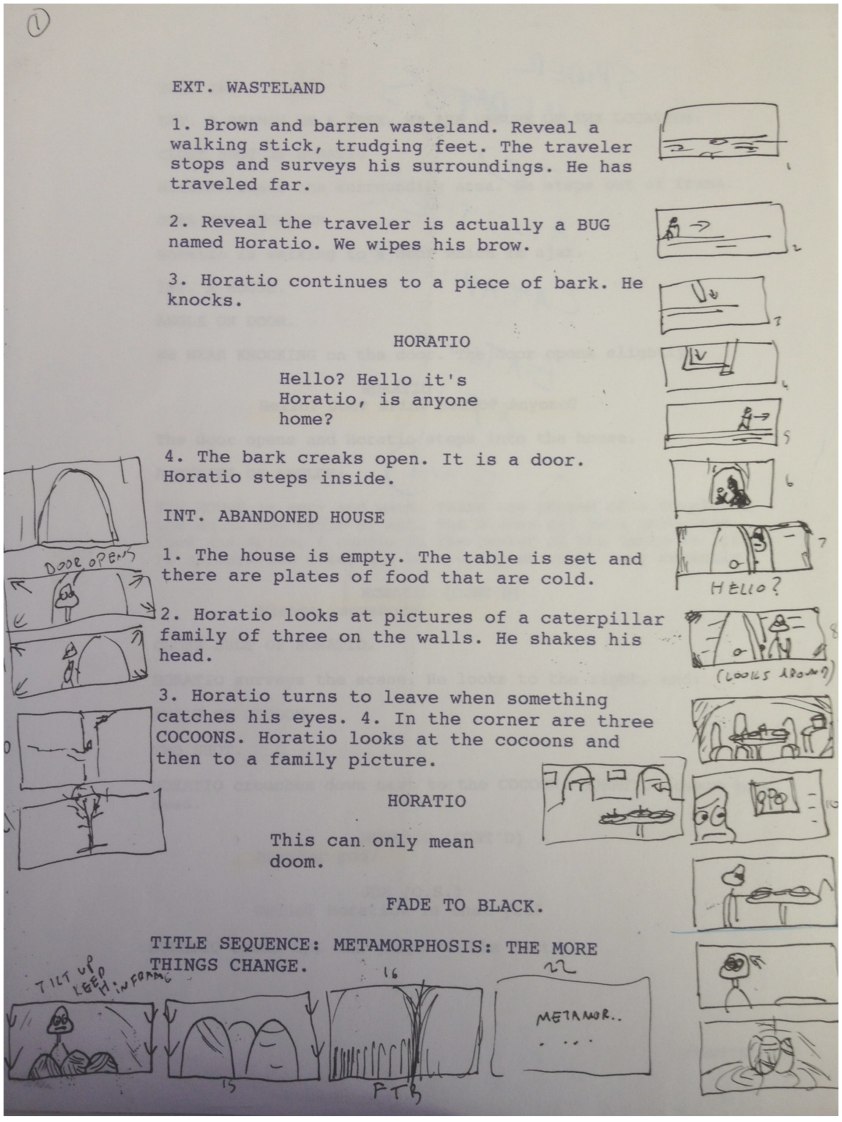
When I went back to school for my Master's Degree, it was to “learn computer animation.” During my time at RIT, I did learn quite a bit about computer animation. I was also reminded that it will never be possible to learn everything there is to know about CG animation. Just the same as it is in stop motion animation. The real lesson is that collaboration brings forth great results.

My first Computer Animated film, “The Adventures of Neeno 7” was a project I executed on my own, with very little help from those around be. The first year at RIT was a steep learning curve as my classmates and I raced to finish our One Quarter Films. That experience was applied to our second year, this time in a collaboration between three people that had skill sets that we each wanted to hone. That devision of labor came together as “Skull and Bunny in S'Not our Fault.” At the end of the day a successful project. Looking back on it now, the one thing about that project that I regret is that the devision of labor was such that the exchange of ideas on the technical side was not present. We just had too much to accomplish for all of us to be involved in every aspect of production.

The thesis was a chance to try my hand at every aspect of production. Through all the challenges and difficulties, it was a real joy to be able to solve problems and see this project to the end. I have gained a greater understanding of not only the process of computer animation, but of film making itself. These experiences will help to direct my future endeavors in both computer and stop motion animation.

APPENDICES

Early script pages, with thumbnails to work out action.



EXT. WASTELAND

1. Brown and barren wasteland. Reveal a walking stick, trudging feet. The traveler stops and surveys his surroundings. He has traveled far.

2. Reveal the traveler is actually a BUG named Horatio. We wipes his brow.

3. Horatio continues to a piece of bark. He knocks.

HORATIO

Hello? Hello it's Horatio, is anyone home?

4. The bark creaks open. It is a door. Horatio steps inside.

INT. ABANDONED HOUSE

1. The house is empty. The table is set and there are plates of food that are cold.

2. Horatio looks at pictures of a caterpillar family of three on the walls. He shakes his head.

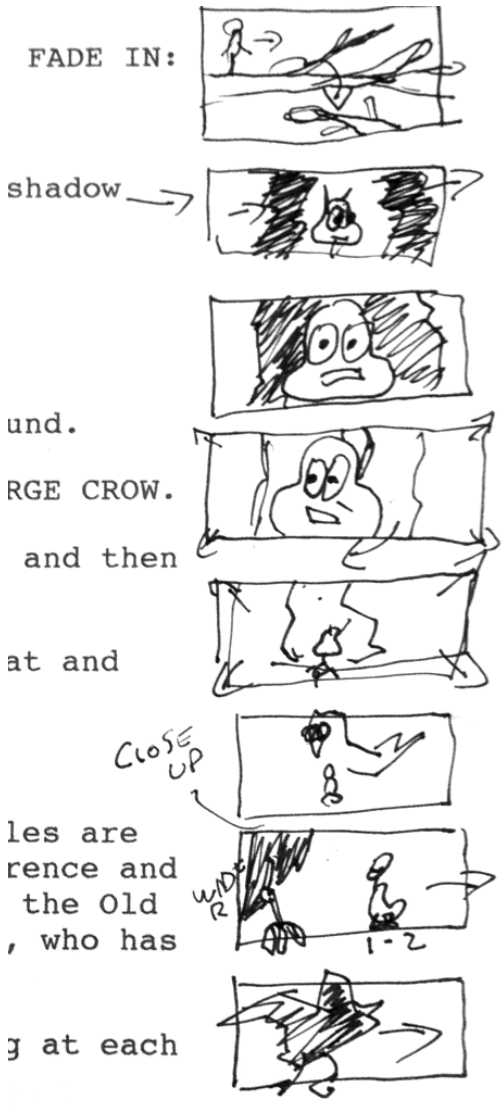
3. Horatio turns to leave when something catches his eyes. 4. In the corner are three COCOONS. Horatio looks at the cocoons and then to a family picture.

HORATIO

This can only mean doom.

FADE TO BLACK.

TITLE SEQUENCE: METAMORPHOSIS: THE MORE THINGS CHANGE.



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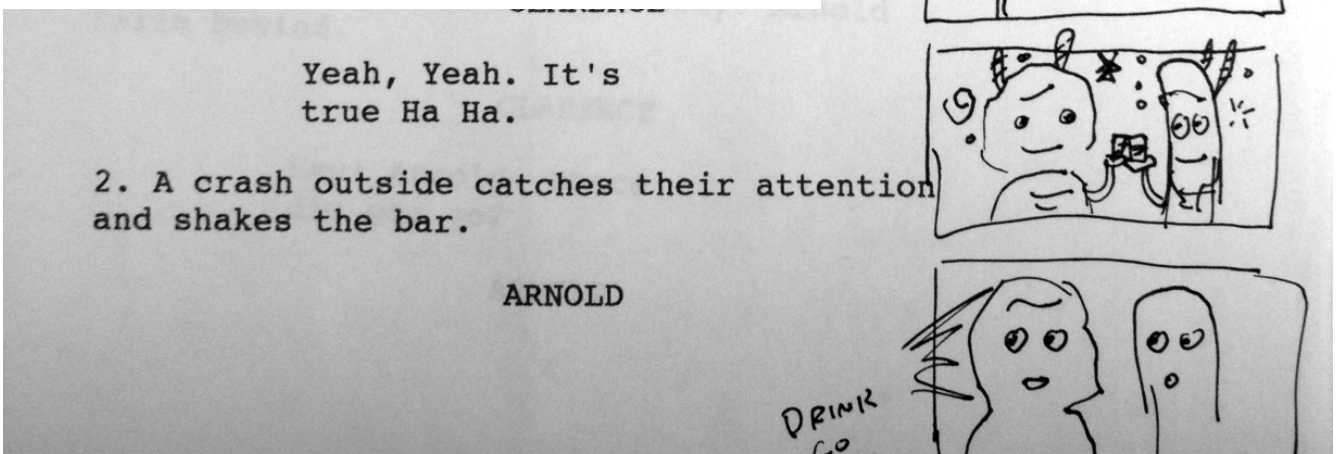
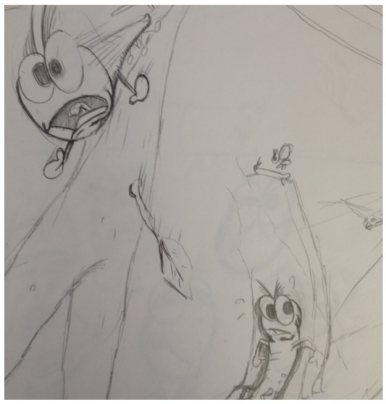
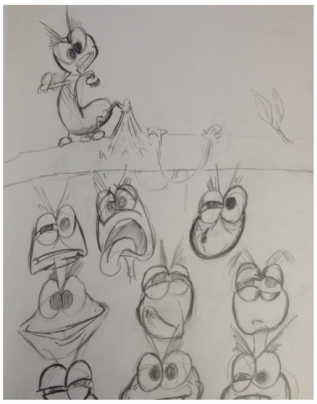


Yeah, Yeah. It's true Ha Ha.

2. A crash outside catches their attention and shakes the bar.

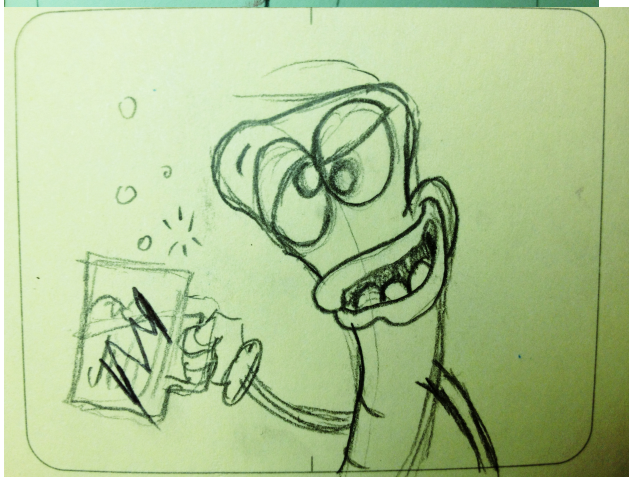
ARNOLD

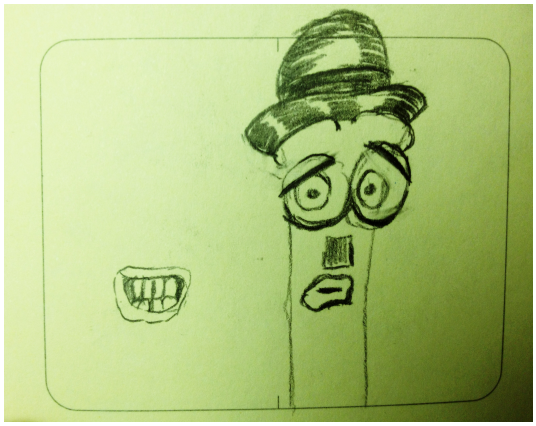




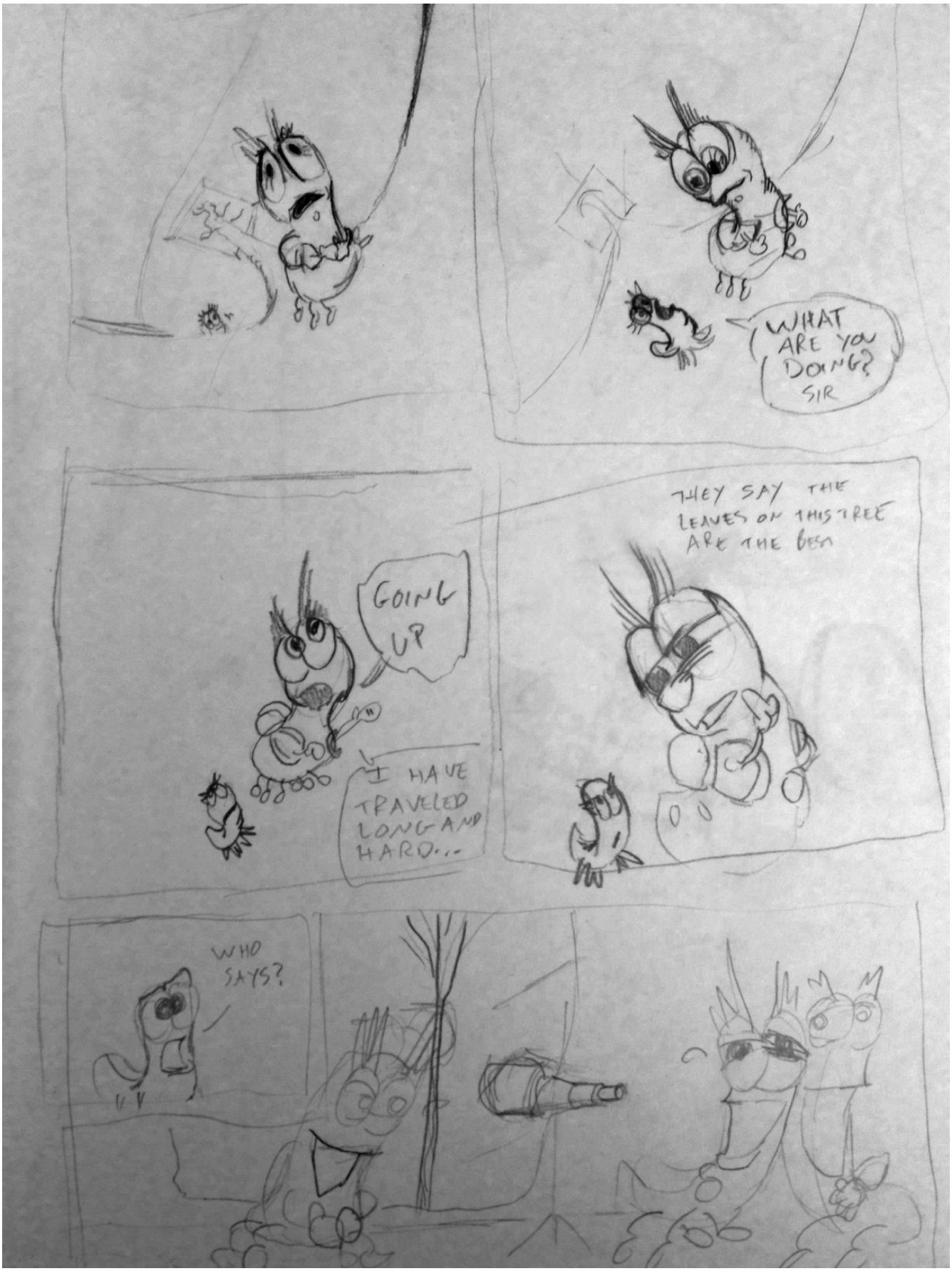
Early concept drawings.

A few early caterpillar drawings with help from a two year c

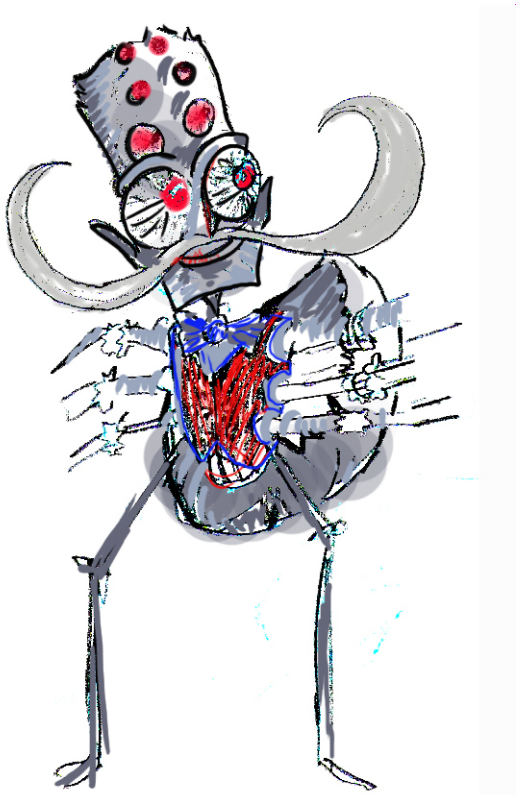




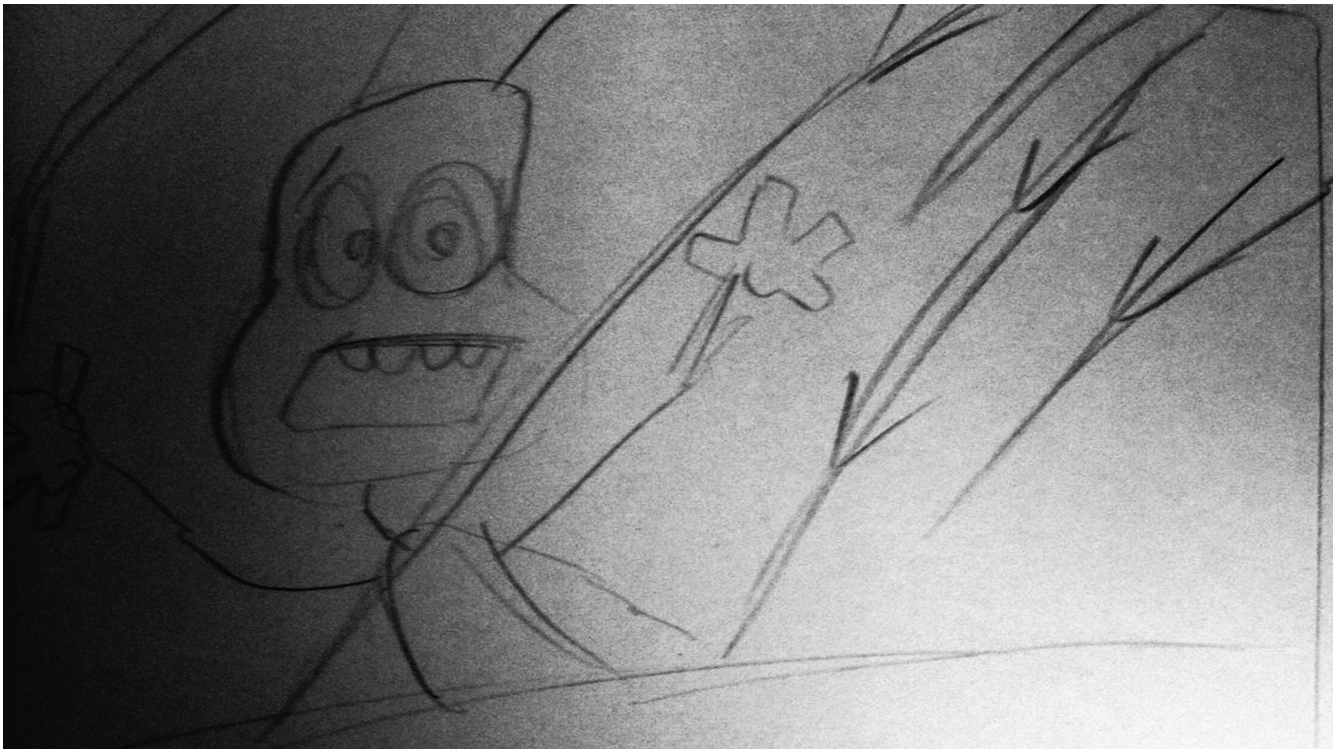
First page of the script, roughly boarded.

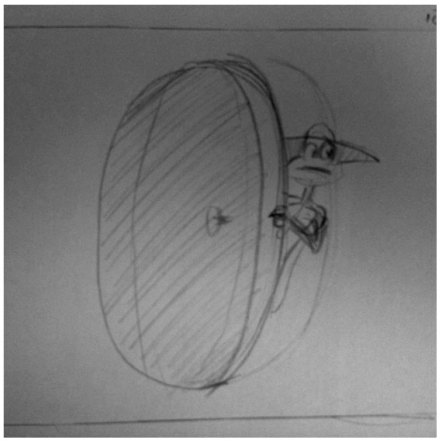


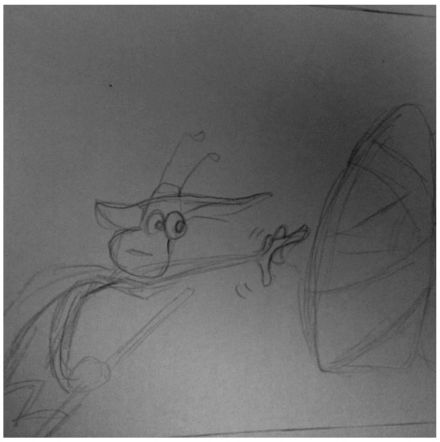
Early sketches

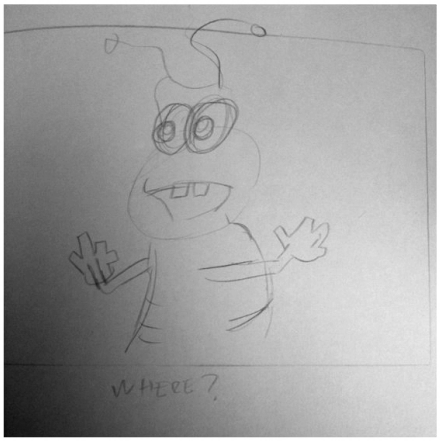


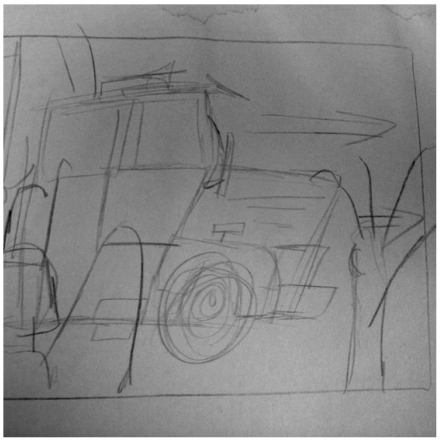
Storyboards



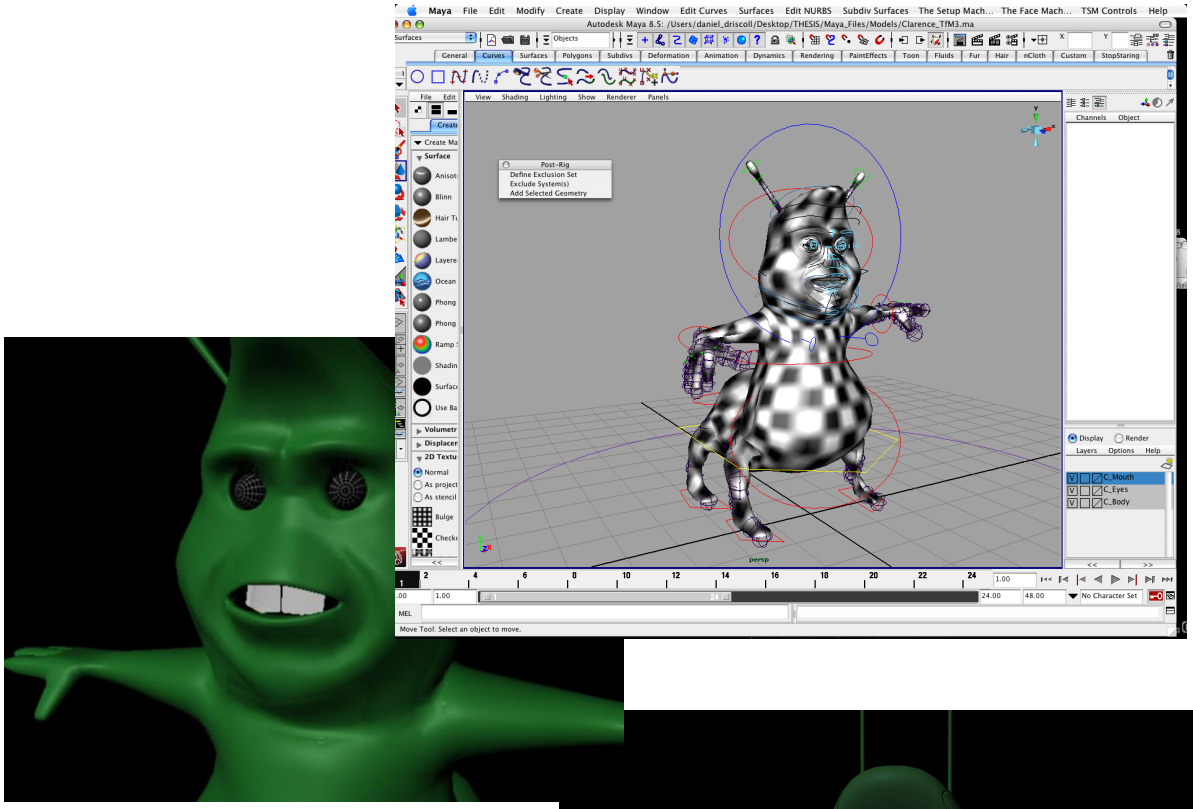


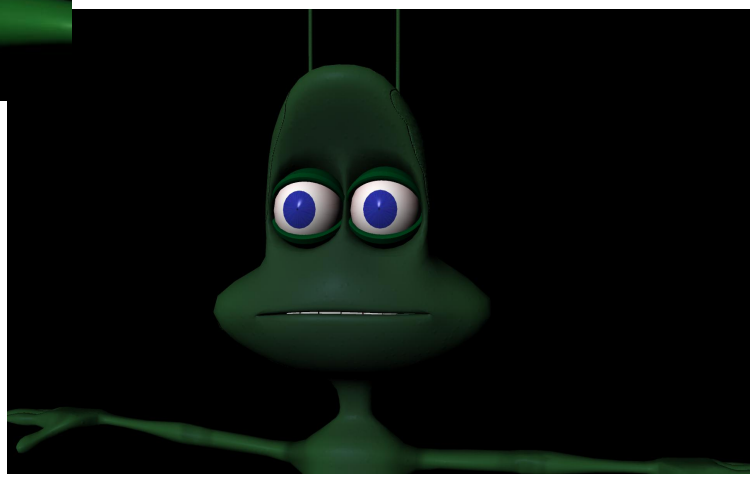


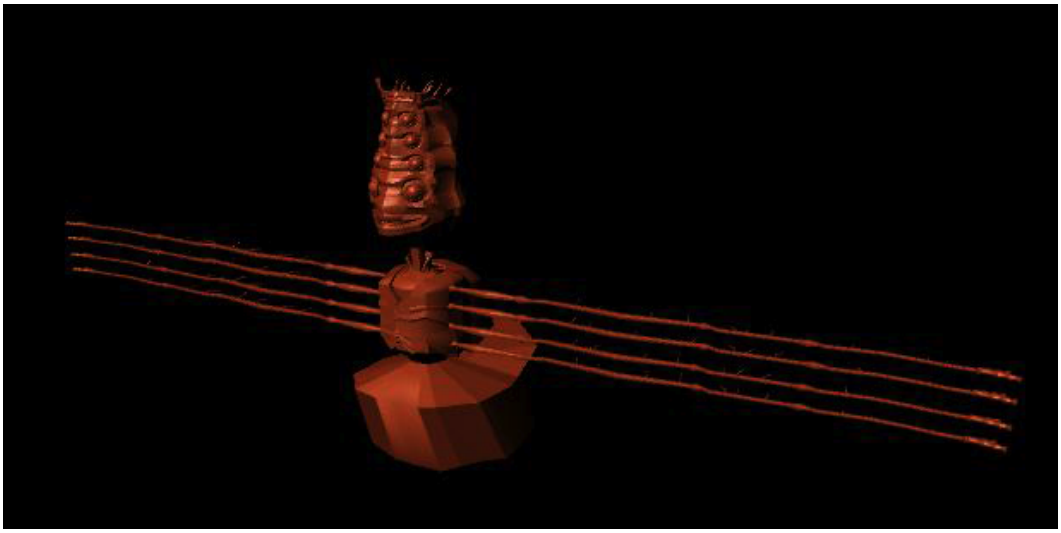




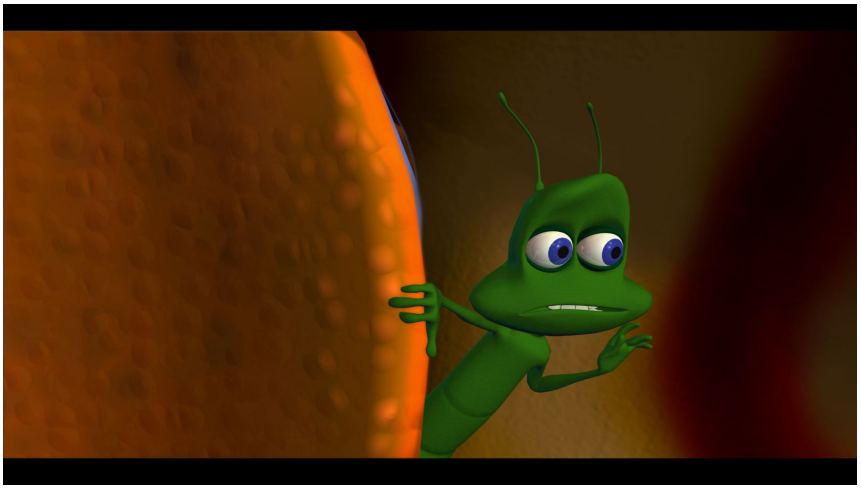
Characters in Maya

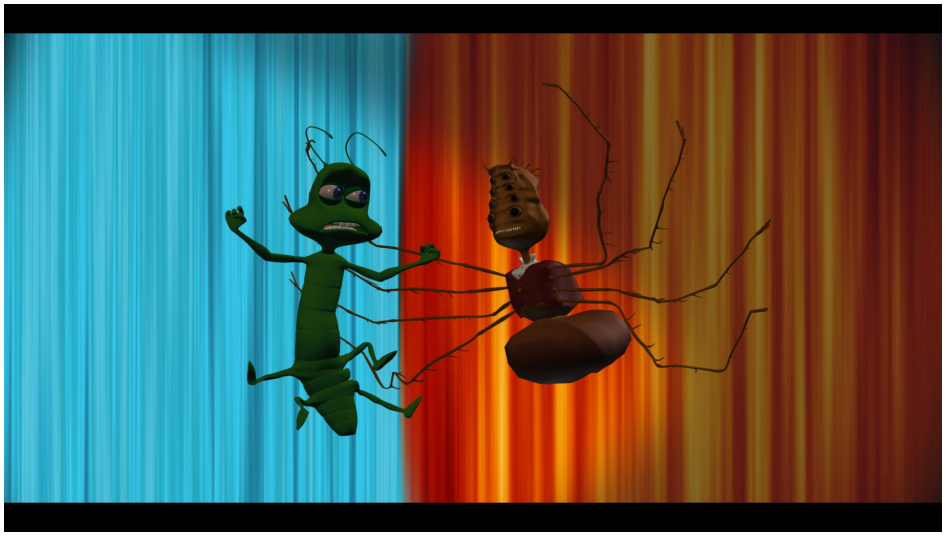






Production Stills





PODIFICATION:
HORATIO AND THE METAMORPHOSIS MYSTERY

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